

TOWN OF CHATHAM RULES AND REGULATIONS OF THE WATER DEPARTMENT

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October 25, 1988**

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The Town of Chatham's Water Department was established under Chapter 265, Acts and Resolves of Massachusetts of 1984 by the Town's accepting Article 87 at the May 13, 1985, Annual Town Meeting. The Board of Selectmen having all the powers and duties of Water and Sewer Commissioners given under the Town of Chatham Charter adopted on the May 11, 1995, Election Ballot have exclusive charge and control of the Town of Chatham's Water Department under Section 69B of Chapter 41 of the Massachusetts General Laws adopted at the May 9, 1994, Annual Town Meeting, Article No. 21 and may prescribe Rules and Regulations regarding the use of Municipal Water.

The following rules and regulations are a part of the contract with every person who takes water from the Town of Chatham and governs the relationship between the Water Department and its consumers, contractors, developers, and all other persons who install, tie into or use water from the Chatham Water System.

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OF THE
WATER DEPARTMENT**

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Modifications:

Modifications of these rules and regulations may take place from time to time as the Board of Selectmen may elect. Printing of such in a newspaper having local circulation will constitute notice and make same a part of the foregoing rules or a modification of same.

ARTICLE I – DEFINITIONS

1. “Approved”: Accepted by the Water Director as meeting the applicable specification stated or cited in this regulation, or as suitable for the proposed use.
2. “Auxiliary Water Supply”: Any water supply on or available to the premises other than the Town of Chatham’s Public Potable Water Supply.
3. “Board “ shall mean the Town of Chatham Board of Selectmen.
4. “Consumer” shall mean the person whose name the Water Department has on its books as the owner of record of the property. The sale or other transfer of title of property does not eliminate the responsibility for payment of any charges or fees and the new owner of record will be held responsible for ensuring that all charges and fees are paid in full at the time of transfer or when the bills are due.
5. “Department of Environmental Protection (DEP)” shall mean Commonwealth of Massachusetts Department of Environmental Protection or where appropriate the Administrator or other duly authorized official of said agency.
6. “Developer” shall mean any person who is constructing an approved Division of Land, commercial or industrial property and its appurtenances.
7. “Division of Land” shall mean the division of a property into two or more properties including properties that are determined to be “Approval Not Required” (ANR).
8. “Environmental Protection Agency (EPA)” shall mean the United States Environmental Protection Agency or where appropriate, the Administrator or other duly authorized official of said Agency.
9. “Licensed Utility Installer (LUI)” shall mean a private contractor or licensed plumber of established reputation and experience who upon submitting a license and permit bond, certificate of insurance, and pays the Licensed Utility Installer’s fee as stated in Article II, all of which are approved by the Water Director permitting them to perform the

installation and repairs of water services on or within public and private property.

10. "Main": A "main" is the supply pipe from which all service connections are made.

11. "Owner" shall mean any person who owns or is constructing an approved Division of Land, residential, commercial or industrial building and its' appurtenances.

12. "Person(s)" shall mean any individual, firm, partnership, co-partnership, joint venture, company, corporation, association, joint stock company, trust, estate, governmental entity, or their legal representatives, agents or assigns.

13. "Public property" shall mean land, right-of-way, or easement owned or controlled by the Town or another town, the Commonwealth of Massachusetts, United States government or political subdivision of any governmental entity.

14. "Service": A "service" is composed of public and private sections. The public portion of a service is the pipe running from the water main to and including the curb stop and curb box. The water meter and check valve is part of the public portion of the service. The private portion begins at the curb stop and continues to and includes the shutoff valve of the meter. If the water meter is located in a meter pit the private portion will also include the meter pit and piping.

15. "Shall" is mandatory; "May" is permissive.

16. "State" shall mean the Commonwealth of Massachusetts.

17. "Town" shall mean the Town of Chatham, Massachusetts or its legal representative, agent, or assignee.

18. "Town Manager" shall mean the Town of Chatham Board of Selectmen's appointed Town Manager.

19. "Water Committee" shall mean the Town of Chatham Board of Selectmen's appointed three person Water and Sewer Advisory Committee.

20. "Water Director" shall mean the Director of the Water and Sewer Departments who is appointed by the Town of Chatham Town Manager and is vested with the authority and responsibility for the implementation and enforcement of these Rules and Regulations.

21. The masculine gender shall include the feminine and the singular shall include the plural where indicated by the context.

ARTICLE II - GENERAL PROVISIONS

1. Application for Water Service – New and Replacement: All applications for a new connection or replacement of an existing connection to the Town Water system shall be made at the office of the Water and Sewer Departments by the owner of the property or by his authorized agent. All applications must contain the full information requested and shall be accompanied by the applicable following fees:

The meter installation fee; the system development fee; inspection fee; and any other fees that are established by the Board of Selectmen (See Current Rate Schedule available at the Water and Sewer Departments' Office).

2. Only licensed plumbers and private contractors of established reputation and experience will be licensed by the Water Director as authorized water main and water service installers (LUI).

3A. Applicants for licenses as water main and water service installers (LUI) shall pay an annual non-refundable filing fee.

3B. Applicants for licenses as water main and water service installers (LUI) shall obtain a License and Permit Bond in the amount of five thousand dollars (\$5,000.00) or an amount equal to 100% of the construction cost of any proposed water connection located within or on public property, or an amount approved by the Water Director whichever is greater. Said license and permit bond shall remain in full force and effect for a period of one(1) year from the date of acceptance by the Water Department and Town of the Licensed Utility Installer's last water main extension or water service connection. The License and Permit Bond shall be submitted to the Water Director with the applicant's letter requesting approval as a Licensed Utility Installer (LUI). The LUI shall submit his renewed license and permit bond on or before the expiration date of his license and permit bond to the Water Department. This bond will guarantee that the LUI will comply with the Rules and Regulations of

the Chatham Water and Sewer Departments and with all statutes, regulations, ordinances of any other Town or State Departments. Failure to comply with these Rules and Regulations shall be grounds for suspension of the LUI license. The license and permit bond shall be duly executed by the principal of the LUI and by a surety company qualified to do business under the Laws of the Commonwealth of Massachusetts and satisfactory to the Water Director.

3C. Before a LUI performs any work in, on under, or around streets, sidewalks, and property belonging to the Town of Chatham, it shall be necessary to furnish simultaneously with the submittal of the License and Permit Bond, a current Certificate of Insurance providing the following coverage:

- a. General Liability \$500,000 Property Damage
 \$500,000-\$1,000,000 Bodily Injury
- b. Automotive Liability \$500,000 Property Damage
 \$500,000 - \$1,000,000 Bodily Injury
- c. Workmen's Compensation and Employer's Liability as required under Massachusetts General Laws.
- d. Insurance shall include coverage for collapse and underground structures.
- e. Insurance shall include coverage for projects/complete operations.

All of the above insurance coverage shall remain in full force and effect for a period of one (1) year from the date of acceptance by the Water Department of the last water main extension and/or service connection installed by the Licensed Utility Installer. The LUI shall renew the Certificate of Insurance on or before the expiration date of any of the above coverage.

4. The LUI shall be fully responsible for the work, and take whatever precautions necessary to prevent injuries to persons and property in or about the work site. The LUI shall pay all debts for labor and materials contracted for or by him on account of the work and shall assume the defense of, indemnify and save harmless the Town of Chatham and its

Officers and Agents from all claims relating to labor and or alleged infringement of inventions, patents, or from injuries to any person or corporation caused by the acts of negligence of the LUI or any of his agents or employees or any subcontractor or any agents or employees of any subcontractor, in doing the work on in consequence of any improper materials, implements or labor used therein.

5. No person(s) shall perform any work in, on, under or around water mains, water services, water appurtenances, or streets, sidewalks, and property belonging to the Town of Chatham or Commonwealth of Massachusetts, until a License Permit Bond and A Certificate of Insurance is approved by the Water Director and the person(s) has received written notice that they are approved and are on file at the Water and Sewer Departments as a LUI.

6. Approved LUI shall renew their Utility Installer's License by submitting a revised License and Permit Bond, Certificate of Insurance, and License Fee by January 1st of each year. All Utility Installer's Licenses expire at midnight December 31st of each year.

7. All costs and expenses incident to the installation and connection of the water services shall be borne by the owner. The owner shall indemnify the Town from any loss or damage that may directly or indirectly be occasioned by the installation or repair of the water services. Construction or repair of all water services on private property shall be performed only by a licensed plumber or a LUI. The Water Department may repair a leak on private property if the owner does not make the repair in a timely manner. All cost of the repair and wasted water will be charged to the owner.

8. A qualified inspector (Town Inspector) shall be designated by the Water Director to represent the interest of the Town of Chatham during construction of any water main extension or water service connections equal to or greater than two (2") inches in diameter and will monitor and inspect the on-going progress of the work on a full time basis. The cost of the inspection shall be borne by the consumer, developer or owner. A \$2000.00 deposit will be submitted to the Water Department to defray the cost of inspection when the application for a permit to connect a water main or service equal to or greater than two (2") inches is made. If a balance of \$500.00 or less remains in the Inspection Account for any project, an additional \$2000.00 will be deposited until the completion of the project. Any balance in any project's account at its satisfactory completion will be refunded. Water mains or the water service

connections will not be turned on until a Certificate of Compliance is submitted by the Town Inspector and approved by the Water Director.

9. After installation of any water main(s) in a division of land or industrial building, the LUI, developer, or owner will furnish a reproducible Ink Mylar "As-Built" drawing with a scale of 1" = 40' to the Water Department. The drawing shall show all of the properties being served with plot plans showing the highway and water main layouts, gates, fire hydrants, and description of the services to each building indicating curb box locations, using buildings or other permanent reference points with two ties and depth in relation to finish ground. The drawing shall contain any other information deemed necessary by the Water Department.

10. Before water is turned on to any new or replacement residential or commercial water service connection and at the time of the water service connection is inspected by the Water Department, the LUI will furnish an "As-Built" drawing to the Water Department on the forms provided by the Water Department. The drawing shall show the street, street name, street water main, building being serviced, driveways and walkways, water service connection to the water main with ties to the building, location of curb stop and box with ties to the building and any other information deemed necessary by the Water Department.

11. Authorization:

No person shall tamper with or tap any water main; connect any service pipe to any water main; install; remove or repair a meter; turn on or shut off the water from any pipe or hydrant without permission of the Water Director or his authorized agent. Persons tampering with any part of the water system are liable to criminal prosecution.

12. Responsibility for Charges:

Consumers of water will be charged and held responsible for all water passing through their water service meter until such time as they have notified the Water Department, in writing, that they no longer desire the use of water. In case of the sale of property, such notice shall give the name and mailing address of the new owner. Outstanding water use invoice (bill) and all other charges for services will remain the responsibility of any owner of the property (liens are attached to the property). Failure to receive invoices (bills) and/or to submit a notification of transfer of ownership will not constitute a reason for any adjustments.

(No water service will be considered disconnected until a period of one year has elapsed, at which time all monthly or quarterly service charges shall cease and water will not be turned on until a new connection application and fees are paid and the connection is approved by the Water Director).

13. New Or Replacement Construction:

Owners of property desiring any new, replacement, or alterations of the water service pipes or appurtenances connected to the water supply must submit an application, on the form provided at the office of the Water and Sewer Departments, together with plans and specifications to the Water Director for review and approval, a minimum of three (3) weeks prior to performing any work in connection with the water supply. The Water Director will determine the terms, charges, and conditions under which the use will be allowed.

14. Water Department To Have Free Access To Premises:

No alterations shall be made to any of the pipes or fixtures installed or approved by the Water Department except by its agents who shall have free access at all times to the premises supplied with public water to ascertain the quantity, quality, and the manner of its use. When such access has been refused or denied the water will be turned off.

Any person found guilty of tampering with a water meter, meter setter, check valve, or appurtenances installed by the Water Department shall be subject to a two hundred dollar (\$200.00) fine as set forth in the General Laws of the Commonwealth of Massachusetts. Any fixtures unsuitable for potable water use will be rejected. Violation of any of these regulations or evidence of fraud, abuse and/or tampering with a water meter, meter setter, check valve, or appurtenances installed by the Water Department shall be deemed sufficient cause to turn off the water supply. The Town reserves the right to take further action as it may deem appropriate for any such violation.

15. Fires:

Whenever a fire occurs within the Town, it is the responsibility of all consumers and owners to reduce, as far as practicable, the use of water.

16. Notice To Electricians And Consumers:

No electrical ground will be allowed to be connected to any water pipes, inside or out, including the meter, unless a grounding electrode or grounding grid, with a total resistance less than the resistance of the water pipe, is connected to the service panel. The connection from the service panel to the water pipes shall have a diameter smaller than the connection from the electric service panel to the ground system. Chemical ground electrodes or chemical soil conditioner will not be used to decrease the grounding system's resistance. Bentonite, conductive concrete or installing deeper grounding electrodes may be used to decrease the grounding system's resistance. The Town of Chatham Water Department is not responsible for any damages to pipes or other property which may be attributed to electrical ground wires attached to water pipes.

17. Conditions Under Which Service is Furnished:

Due to technical reasons and conditions beyond its control, the Water Department cannot guarantee constant pressure or uninterrupted service. The Water Department will use its best effort to maintain adequate pressure and water flows.

18. General Disclaimer Statements:

A. No Liability for Interruption of Service:

A consumer shall not be entitled to damages, nor shall payments be refunded for any interruption of supply, occasioned either by damage to any portion of the system or by turning off the supply for the purpose of additions, maintenance, or repairs to the water system or by stoppage or shortage of supply due to causes beyond the control of the Water Department, such as excessive drought, excessive use and waste of water by other consumers or by leaks or defects in the pipes or appliances owned by the Town or other consumers.

B. No Liability For Dirty Water:

The Water Department will not be responsible for damages caused by dirty water resulting from the opening or closing of any gate valve for repairs, the use of any hydrant, or the breaking of any pipe.

C. No Liability For Consumer's Pipe:

The Water Department assumes no liability for conditions which exist in consumer's pipes coincident to or following the repairs of any water main pipe, service pipe, meter, or other appliance belonging to the Water Department.

D. No Liability For Collapsed Boiler Or Damages Appliances:

The Water Department reserves the right at any time without notice to turn off the water in the water mains and services for the purpose of making repairs or extensions to the water mains or services, or for other necessary purposes. Persons having boilers or other appliances that depend on the pressure in the pipes to keep them supplied with water are hereby cautioned against the danger from these turn-offs and are required to provide (at their own expense) suitable safety devices to protect their appliances against such turn offs. In any event, it is expressly stipulated that the Water Department will not be liable for any damage resulting from water having been turned off, either through accident or necessity.

E. No Liability For Turning –Off Water Without Notice:

When it becomes necessary to turn-off the water to any section of the Town because of an accident or for the purpose of making changes or repairs, the Water Department will endeavor to give timely notice to as many of the consumers affected thereby, as time and the character of the repairs or the accident will permit. The Water Department will (so far as practicable) use its best efforts to prevent inconvenience and damage arising from any such turn off. Failure to give such notice will not render the Water Department responsible or liable for any damages that may result from the turning off of the supply of water or any coincident conditions.

19. Grievance and Variance Procedure:

A person who seeks a variance or feels aggravated due to the interpretation of these Rules and Regulations as it affects them shall have recourse, without prejudice or retribution, to seek a response to the alleged situation, condition, problem or misunderstanding in the following manner:

Step 1. They shall present the issue to the Water Director in writing on the forms available at the Water and Sewer Departments' office, documenting the time and/or dates of the circumstances and reasons for a

variance request or said grievance. The person may expect a reply to the request for variance or grievance within thirty (30) days from the date of filing with the Water Director.

Step 2. Should the issue not be resolved with the response from the Water Director, or not received within thirty (30) days the person may take the issue to the Water and Sewer Advisory Committee, such submission to include copies of the written documentation of the variance request or said grievance, with note of sequence of actions or inactions taken to date.

The Water and Sewer Advisory Committee shall use their best effort to hold a hearing within thirty (30) days of receipt of an application for a abatement, variance or grievance request and shall render a decision within thirty (30) days from the date of the hearing.

Step 3. Should the issue not be resolved with the response from the Water and Sewer Advisory Committee, or not received within thirty (30) days after the Water and Sewer Advisory Committee closes the hearing on a person's application for abatement, variance or grievance request, the person may take the issue to the Board of Selectmen, such submission to include copies of the written documentation of the variance request or said grievance, with note of sequence of actions or inactions taken to date.

The Board of Selectmen shall use their best effort to hold a hearing within thirty (30) days of receipt of an application for an abatement, variance or grievance request and shall render a decision within forty-five (45) days from date of the hearing.

20. Violations Of Regulations:

Any violations of these Rules and Regulations may result in the Board or its agent ordering the turning off of the water to the violator's premises and may result in other legal action. When the water has been turned off for violations of these Rules and Regulations, it will not be restored until the Water Department is satisfied that there will not be further cause of complaint and all charges have been paid relating to the cost of turning off and turning on the water.

21. Non-Discrimination:

The Town of Chatham is an equal opportunity municipality. The Town shall not discriminate against an applicant for a water connection or employment because of age, sex, race, creed, color, handicap, or national

origin. Discrimination is prohibited by Federal Law. Complaints of discrimination may be filed with the Secretary of Agriculture, Washington, D.C. 20250.

ARTICLE III – CHARGES

1. Date When Consumers Are To Pay:

A minimum charge will be assessed for water services from the initial date the water is turned on whether or not the water is used (See Current Rate Schedule available at the Water and Sewer Departments' office). No service will be considered disconnected until a period of one year has elapsed. The Consumer will be responsible for the minimum charges that would have been billed, if the consumer request that the service be turned on within one year from the date the Water Department received written notice to discontinue water service.

2. Collection Of Water And Service Charges:

Water Bills are due and payable within thirty (30) days from date of issuance. All water bills that are outstanding after thirty (30) days will be mailed a demand notice which will be due within fourteen (14) days. The demand notices shall include a demand charge and interest on the outstanding balance. Interest shall accrue at the statutory rate applicable to property taxes as stated in MGL Chapter 59, Section 57. If the charges are still unpaid after the due date of the demand notice, a hand delivered notice will be posted on the premises being served one week before water service is turned off. If the water service is turned off for non-payment, water will not be turned on until all past charges are paid in full including all expenses associated with collection of such charges and the shut off for non-payment charge.

3. Charges for "Turning-On" or "Turning-Off" Water Service:

A charge will be made for "turning-on" and "turning-off" a water service when requested by the consumer or his agent. The Water Department requires a three week (3) written notice for a seasonal turn-off or turn-on and the consumer or owner or their representative must be present at the scheduled turn-on or turn-off.

4. Delinquent Accounts:

No consumer who owes an overdue water bill shall be entitled to the future use of water at the same premise, until such bills are paid in full, together with all costs that have been assessed.

5. All Water Used and Metered Is to be Paid for:

All water used must be metered and all water passing through a meter must be paid for whether used or wasted. The Town of Chatham or its Water Department shall not be held liable for nor shall any claims be made against it in consequence for the breaking of any pipe or fixture. Consumers must keep their water pipes and fixtures in good repair and protected from freezing at their own expense. Consumers will be held responsible for any damage and water use resulting from their failure to do so. All consumers are required to prevent any waste of water at all times.

6. Fire Hydrants Used for Temporary Water Supply:

Any connection to a hydrant must be metered and receive the approval of the Water Director. Water used by the Fire Department in the performance of its official duties are exempt, provided the Fire Department notifies the Water Department of such use within 48 hours after an emergency and 48 hours before any routine training. Unscheduled training may be authorized by telephone prior to performing the training. All water use must be controlled by a separate valve other than the hydrant valve, and be equipped with an approved backflow prevention device. The installing and supplying of said meter, valve, and backflow prevention device will be at the consumer's expense. The installation will be inspected by the Water Department before the Water Department turns on the water. Only employees of the Water Department shall open or close the hydrant.

7. Malfunctioning Meter Water Use Calculations:

When a meter becomes inoperative or fails to register, the consumer will be charged at the average daily consumption as shown by the meter when it was functioning properly for the corresponding period of the preceding two years or for whatever the preceding service time is, if less than two years.

8. Use of Water from a Non-Metered Source Is Not Permitted:

Water supplied by the Water Department for any purpose shall be drawn from a metered service, except water used by the Fire Department in the performance of its official duties, provided the Fire Department notifies the Water Department as stated in paragraph number 6, of Article III.

9. Supplying Water to Other Premises:

A service connection that is metered may supply water to a building or a single family dwelling and/or other auxiliary building located on the same property. The supplying of water will not be permitted to a premise or building of another person located on a separate lot, except in special emergencies and then only with the approval of the Water Department.

10. Request for Adjustments to Water Bills:

All requests for adjustments to a water bill shall be made within thirty (30) days of issuance of said bill and submitted in writing to the Water Department on the approved abatement request forms available at the Water Department Office.

11. Abatement Procedures for Water Bills:

See Article II-General Provisions, paragraph 19. Grievance and Variance Procedure

ARTICLE IV – WATER SERVICES

1. Material and Installation:

All materials to be used in conjunction with any and all water services and the installation of same shall be in strict accord with Article VII, "Specifications for the Installation of Water Mains and Services" of these Rules and Regulations. All water mains and services shall be installed or replaced by the Water Department employees or a contractor who has been approved by the Water Department to do this work. All water service installations or repairs must be inspected by the Water Department before the water service is turned on.

2. Consumer's Responsibility to Keep Pipes and Fixtures in Good Condition:

Consumers must keep their water pipes and fixtures in good repair and protected from freezing, at their own expense. Consumers will be held responsible for any damage and water wasted resulting from their failure to do so. Consumers are required to prevent any waste of water at all times. The Town of Chatham or its Water Department shall not be held liable for nor shall any claims be made against it as a result of the breaking of any consumers or owner's pipe or fixture.

3. Right to Repair Service Pipes:

Any service pipes between the curb box and the water meter maybe repaired or replaced by the Water Department or its approved contractor when deemed necessary for the protection of the supply or preventing the waste of water. All costs of material and labor involved in the repair or replacement of a water service shall be paid by the consumer or his authorized contractor before the water is turned on.

4. Size of Service Pipe:

All water service piping sizes shall be calculated by the consumer or his agent and shall be a minimum of one (1") inch copper tube size (CTS) diameter polyethylene (P.E.) pipe unless otherwise approved by the Water Director.

5. Request for "Turning-on" or "Turning-Off" Water:

Request for a "turn-on" or turn-off" of a water service shall be made 15 working days (three weeks) in advance, except in case of emergency. A charge will be made for each "turn-on" and "turn-off" and only the Water Department personnel shall open or close curb stops. Access to the water meters is necessary in order to accomplish a "turn-on" or "turn-off". "Turn-on" or "turn-off" of a service shall be scheduled and performed during normal working hours of the Water Department (except in emergencies) unless the consumer wishes to pay the after-hour rate (see Current Rate Schedule available at the Water Department) and an employee of the Water Department is available to do the work. The owner or their representative must be present at the scheduled "turn-on" or "turn-off" to verify that the "turn-on" or "turn-off" was performed. Any damage to the customer's premises during "turn-on" or "turn-off" resulting

from damaged or faulty service lines, fixtures, or plumbing is not the responsibility of the Water Department.

6. Availability of Water Service:

Installation of water services beyond the end of an existing water main will not be allowed. The water main must be extended, including any necessary hydrants and appurtenances, to the furthest limit of the applicant's property or to a point approved by the Water Director. Water mains shall be interconnected to other water mains to avoid dead end.

7. Service Pipe Trenches:

Service pipes shall be located as follows: not within five (5) feet of other utilities; not within ten (10) feet from any part of a septage system's leaching pit or field; nor within ten (10) feet of any sewer line and septage tank.

8. Right to Restrict the Use of Water:

The Board has the right to restrict the use of water during dry seasons or any other emergency conditions within the guidelines of Chapter 33 of the General Bylaw, "Water and Supply Emergency Protective Bylaw" and revised at the May 13, 1995, Annual Town Meeting, Article 24-"Water Supply Emergency Protective Bylaw" and revised at the May 13, 1997, Annual Town Meeting, Article 23.

9. Construction within a Flood Plain:

All proposed water facilities to be located in the flood plain district established under the zoning by-laws, shall require that new or replacement water supply systems be designed and constructed to eliminate infiltration of flood waters into the systems.

10. Fire Service Suppressant Water Service Connections:

The property owner shall submit an application to the Water Department, on the forms provided by the Water Department, for each fire suppressant system(s) that the owner wishes to connect to the public water system. The fire suppressant system's water connection and service pipe shall only supply water to the approved fire suppressant system. Domestic or other water uses shall not be drawn from a fire suppressant service pipe, nor will fire suppressant water be drawn from

a domestic water service connection or pipe. The fire suppressant service pipe shall be installed by the owner at the owner's expense, including the street connection. A backflow prevention device, as prescribed in ARTICLE V-CROSS CONNECTIONS, shall be installed on all fire suppressant service lines. The layout of check valves or other backflow prevention devices, type and sized of pipe, type and size of control valves, and, if required, meter shall be subject to the review and approval of the Chatham Water Department, Chatham Fire Department, Chatham Building Department, and, if required, the Commonwealth of Massachusetts Department of Environmental Protection. Failure to comply with this regulation will subject the owner to termination of the water service and payment for the quantity of water used as estimated solely by the Water Department.

ARTICLE V-CROSS CONNECTIONS

The Water Department shall be responsible for the protection of its Public Potable Water Distribution System from contaminants or pollutants through the water service connection. No unprotected cross connection is permitted between the public water supply and any other private source of water or any process (real or potential) which could contaminate the public water supply (without a permit issued for the same by the Water Department and/or the Commonwealth of Massachusetts Department of Environmental Protection under Chapter III, Section 160A of the Massachusetts General Laws). The Water Department or its designated agent shall give notice in writing to said consumer to install such an approved backflow prevention device at each service connection to the consumer's premises. The consumer shall within 30 days install such approved device or devices at his own expense. Failure, refusal or inability on the part of the consumer to install said device or devices within 30 days shall constitute a ground for discontinuing water service to the premises until such device or devices have been properly installed.

1. Cross Connection Definitions:

Air Gap: The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture, or other device and the flood rim of said vessel. An approved air-gap shall be as required by the Water Department Standards, minimum of three inches (3"), larger air gaps may be required as directed by the EPA, DEP, or the Massachusetts Plumbing Codes.

Backflow: The flow of water or other liquids, mixtures or substances under pressure into the distributing pipes of the public potable water supply system from any source or sources other than public potable water supply's source.

Back-Siphonage: The flow of water or other liquids, mixtures, or substances into the distributing pipes of the public potable water supply system from any source other than the public potable water supply's source caused by the sudden reduction of pressure in the public potable water supply system.

Backflow Preventer: A device or means designed to prevent backflow or siphonage.

TYPES OF BACKFLOW PREVENTION DEVICES:

- a. Reduced Pressure Zone Principle Device: An assembly of two independently operating approved check valves with an automatically operating differential relief valve between the two check valves with tightly closing shut-off valves on either side of the check valves plus properly located test cocks for the testing of the check and relief valves;
- b. Double Check Valve Assembly: An assembly of two independently operating approved check valves with tightly closing shut-off valves on each side of the check valves plus properly located test cocks for the testing of each valve ; and
- c. Pressure Vacuum Breaker: A device containing one or two independently operating loaded check valves and an independently operating loaded air inlet valve located on the discharge side of the check or checks.

BACKFLOW PREVENTION DEVICE DEFINITIONS:

Contamination: Means an impairment of the quality of the potable water by sewage, industrial fluids, or waste liquids, compounds, or other materials to a degree which creates an actual hazard to the public health through poisoning or through the spread of disease.

Cross Connection: Any physical connection or arrangement of piping or fixtures between two otherwise separated piping systems one of which contains potable water and the other non-potable water or industrial fluids of questionable safety, through which, or because of which, back-flow or back-siphonage into the potable water system, may occur.

Cross-Connection Control by Containment: The installation of any approved backflow prevention device on the water service line before any other plumbing connection of any consumer's premises or the installation of an approved back-flow prevention device on the service line leading to and supplying a portion of a consumer's water system where there are actual or potential cross-connections which cannot be effectively eliminated or controlled at the point of the cross-connection.

Cross-Connections - Controlled: A connection between a public potable water system and a non-potable water system with an approved backflow prevention device, properly installed so that it will continuously afford the protection commensurate with the degree of hazard.

Hazard, Degree of: The term is derived from an evaluation of the potential risk to the public health and the adverse effect of the hazard upon the public potable water system.

TYPES OF HAZARDS:

- a. Hazard-Health (High Hazard): Any condition, device, or practice in the water supply system and its operation which could create, or, in the judgment of the Water Department, may create a danger to the health and well-being of the water consumer.
- b. Hazard-Plumbing (High Hazard): A plumbing type cross connection in a consumer's potable water system that has not been properly protected by a vacuum breaker, air-gap separation, or backflow prevention device. Unprotected plumbing type cross-connection are considered to be a health hazard.
- c. Hazard-Industrial Fluids System (High Hazard): Any system containing a fluid or solution which may be chemically, biologically, or otherwise contaminated or polluted in a form or concentration such as would constitute a health, system, pollution, or plumbing hazard if introduced into a public potable water supply.

HAZARD DEFINITIONS:

Pollution: Means the presence of any foreign substance (organic, inorganic, or biological) in water which tends to degrade its quality so as to constitute a hazard or impair the usefulness or quality of the water to a degree which does not create an actual hazard to the public health but which does adversely and unreasonably affect such waters for domestic use.

Public Potable Water Supply: Shall mean the Town of Chatham's water supply and distribution system.

Water-Potable: Water from a source that has been approved for human consumption by the Commonwealth of Massachusetts Water Supply and Pollution Control Commission.

Water-Non-Potable: Water which is not safe for human consumption or which is of questionable potability.

Water – Service Connections: The terminal end of a service connection from the public potable water system; i.e., where the water purveyor loses jurisdiction and sanitary control over the water at its point of delivery to the consumer's water system. If a meter is installed at the end of the service connection, then the service connection shall mean the downstream end of the meter. Service connection shall also include water service connection from a fire hydrant and all other temporary or emergency water service connections from the public potable water system.

Water – Used: Any water supplied by a water purveyor from a public potable water system to a consumer's water system after it has passed through the point of delivery and is no longer under the sanitary control of the water purveyor.

2. Backflow Prevention

An approved backflow prevention device shall be installed on each service line to a consumer's water system at or near the property line or immediately inside the building being served, but in all cases, before the first branch line leading off the service line and wherever the following conditions exist:

In the case of premises having an auxiliary water supply which is not or may not be of safe biological or chemical quality and which is not acceptable as an additional source by the Commonwealth of Massachusetts Water Supply and Pollution Control Commission, the public potable water system shall be protected against backflow from the premises by installing a backflow prevention device in the service line appropriate to the degree of hazard. Note: Auxiliary water supplies shall not be permanently connected to any public potable water supply service connection or plumbing. Any temporary auxiliary water supply connection must be approved, in writing, by the Water Department after the public potable water supply has been disconnected. Reconnection of a service connection or plumbing system to the public potable water supply after the use of an auxiliary water supply must be approved, in writing, by the Water Department after the auxiliary water supply has been disconnected from the service from the service connection or plumbing system. In addition, the service connection and/or plumbing system may be required to be disinfected after the use of an auxiliary water supply.

In the case of premises on which any industrial fluids or any other objectionable substance is handled in such a fashion as to create an actual or potential hazard to the public potable water system, the public potable water system shall be protected against backflow from the premises by installing a backflow prevention device in the service line appropriate to the degree of hazard.

In the case of premises having (1) internal cross-connection that cannot be permanently corrected and controlled or (2) intricate plumbing and piping arrangements or (3) where entry to all portions of the premises is not readily accessible for inspection purposes, making it impracticable or impossible to ascertain whether or not dangerous cross-connections exist, the public potable water system shall be protected against backflow from the premises by installing a backflow prevention device in the service line, appropriate to the degree of hazard.

3. The type of protection device required shall depend upon the degree of hazard which exists as follows:

- a. In the case of any premises where there is an auxiliary water supply; or where there is any material dangerous to health which is handled in a fashion as to create an actual or potential hazard to the public potable water system; or where there are "uncontrollable" cross-connections, either actual or potential, the

public potable water system shall be protected by an approved air-gap separation or an approved reduced pressure principal backflow prevention device at the water service connection.

- b. In the case of any premises where there is water or substance that would be objectionable but not hazardous to health, if introduced into the public potable water system, the public potable water system shall be protected by an approved double check valve assembly.
- c. In the case of any premises where, because of security requirements or other prohibitions or restrictions it is impossible or impractical to make a complete cross-connection survey, the public potable water system shall be protected against back-flow or back-siphonage from the premises by the installation of a back-flow or back-siphonage from the premises by the installation of a back flow prevention device in the service line. In this case, maximum protection will be required, that is an approved air-gap separation or an approved reduced pressure principle backflow prevention device shall be installed in each water service connection to the premises.

Any backflow prevention device required herein shall be of a model and size approved by the Water Department. The term "Approved Backflow Prevention Device" shall mean a device that is on the "Approved List of Backflow Preventors and Double Check Valves" as revised by the Commonwealth of Massachusetts Departments of Environmental Protection, Water Supply Division

- 4. The Water Department will conduct testing on these devices at least once a year or as required by the Commonwealth of Massachusetts DEP water regulation. The Water Department may have these tests performed by a designated representative. The consumer or owner of the device will be charged for these tests. In those instances where the Water Department deems the hazard to be great enough, it may require certified inspections at more frequent intervals. The Water Department's review in determining if the hazard is great enough for more frequent testing intervals, will be based on the Degree of Hazard: Health Hazard (High Hazard) and/or Plumbing Hazard (High Hazard) and/or Industrial Fluids Systems Hazard as defined under the definition of this Section. These inspections and tests shall be at the expense of the consumer or owner and shall be performed by the Water Department Personnel and/or by a certified tester approved by the Water Department

and approved by the Commonwealth of Massachusetts DEP. It shall be the duty of the Water Department to see that these tests are made on schedule. The Water Department shall notify the consumer or owner in advance when the tests are to be undertaken so that a representative can witness the test, if so desired. These devices shall be repaired, overhauled or replaced at the expense of the consumer or owner whenever said devices are found to be defective. Records of such tests shall be kept by the Water Department and the consumer or owner.

5. All presently installed backflow prevention devices which do not meet requirements of this section but were approved devices for the purposes described herein at the time of installation and which have been properly maintained, shall, except for the inspection and maintenance requirements, be excluded from the requirements of these rules so long as the Water Department is assured that they will satisfactorily protect the public potable water system.

Whenever the existing device is moved from the present location or requires more than minimum maintenance or when the Water Department finds that the unit or maintenance cannot protect against a hazard to health, the unit shall be replaced by a backflow prevention device meeting the requirements of this section.

6. All decisions relating to determination of backflow devices will be made by the Water Department. Failure to comply with any directive from the Water Department will result in termination of service.

7. All testing and/or maintenance performed on backflow devices by the Water Department or its agent will be charged to the consumer or owner of the device.

8. No other source of water shall be connected to any piping using water supplied by the Water Department such as an auxiliary well for a sprinkler system. A fine of \$500.00 may be charged for each violation and each day the violation exists shall be considered a separate violation.

9. A backflow device shall be installed on all fire service lines. No service line or tap is to be taken from any private fire line or hydrant lateral. Failure to comply with this regulation will subject the consumer or owner to discontinuance of the water service and payment for the quantity of water used as estimated by the Water Department. No water

use is permitted through fire connections except for the extinguishing of fires.

10. The Water Department cannot technically guarantee to maintain a constant pressure, volume or supply of water at all times. The service may be subject to shut downs or variations in the pressure and volume as the public potable water system operations require.

ARTICLE VI – WATER METERS

1. Meter Installation:

All meters and appurtenances supplied by the Water Department are the property of the Water Department. All meters and appurtenances installed or supplied by the Water Department shall be installed, relocated, removed, or disturbed only by an employee of the Water Department. All meters shall be sealed or pinned at the time of installation.

2. Consumers to Pay for Meter Repairs:

Repairs or damage to a meter from freezing, hot water, act of neglect by the owner or consumer or other external causes shall be charged to the owner or consumer. The sale or other transfer of title of property does not eliminate the responsibility for payment of these repairs and the new owner or consumer will be responsible for ensuring that all charges and fees are paid in full at the time of transfer. (See Current Rates Schedule available at the Water and Sewer Departments Office).

3. Service Pipe and Meter Size:

The proper size of the water service line and meter required for any given service shall be calculated by the consumer or his agent and shall be approved by the Water Department.

4. Changing Meters to Fit Water Use Conditions:

If the Water Department determines that a water meter does not fit the conditions and/or the water usage of a service, such as but not limited to, either too large or too small, the Water Department shall have the right to change such meter so that it does fit the conditions and/or the water usage of the service. The consumer will be responsible for all charges and fees associated with the change of this meter.

5. Repairing and Replacing Meters:

The Water Department will have the right to remove, repair or replace any meter or its appurtenances at any time it deems necessary in order

to assure the accuracy of the meter or to update the meters. When the meter repair or replacement is for the Water Department's convenience, the meter repair or replacement cost will be the responsibility of the Water Department.

6. Location of Meter and Access to the Meter:

The owner shall provide a location within the building for the meter(s) and its appurtenances, when the water service has a service pipe length less than 100 feet from property line to the building. The water meter shall be located in a tube type meter pit located at the property line after the curb stop or shut off valve, when the water service has a service pipe length longer than 100 feet from the property line to the building. Whenever the Water Department agrees that the circumstances do not permit a suitable location for the water meter within the buildings, the water meter will be placed with a tube type meter pit at the property line after the curb stop. The meter pit's location, design, and construction shall be subject to the approval of the Water Department, and it shall be designed, constructed, and maintained at the expense of the owner. The meter pit and water meter shall both be easily accessible for reading and for making repairs to the meter.

The water meter's location and its appurtenances shall be easily accessible for reading and for repairs, and subject to the approval of the Water Department. Any change in location of a meter shall be approved by the Water Department and shall be at the owner's expense. The owner shall permit the Water Department to attach the water meter's wiring, external reading device, and appurtenances to any structure, on the driveway side of the structure or adjacent to the telephone or electrical services' entrances.

The owner shall see that the water meter pit, water meter, reading device, and appurtenances are readily accessible at all times to the Water Department. Failure to remove any obstruction which prevents access to the meter, within three (3) days after being notified by the Water Department of the problem, will cause the water to be shut off to the premises, and it will not be turned on until all obstructions are removed, all regulations are complied with, and all expenses for turning on and turning off the water are paid.

7. Testing Meters by Request:

The accuracy of the meter on any premises shall be tested by the Water Department upon written request of the consumer. The consumer or his representative may be present for the test. If on such test the meter is

found to be accurate, the meter shall be reinstalled and the consumer shall be billed the cost of the testing. If, however, the test proves that the meter is not accurate within a two (2%) percent margin of error, the meter will be replaced at no charge to the consumer and an adjustment on the disputed water bill will be made based on the percent of error of the meter

8. Metering Individual Units:

Each residential unit in a multi-family, condominium or apartment complex and each unit in a commercial or industrial complex, shall be plumbed and treated as a separate service and shall be metered individually. In existing multi-family, condominium, or apartment complexes that do not have individual unit plumbing are exempt from this regulation until it is renovated or added to at a cost equal to or more than fifty (50%) percent of the Town's tax assessment for the building that is renovated or added to. Until such time that individual units are plumbed and are metered separately the complex will be treated as one service account.

9. Meter Valve

A ball valve type of compression-ended stop and waste design will be installed in the basement or meter pit on the street side of the meter.

10. Double Check Valve

An approved backflow prevention device (double check valve) shall be installed on each service line to a consumer's water system immediately after the meter (consumer's side of the meter) and before the first branch line leading off the service line. Note: Service lines to buildings other than for residential use may require another type of backflow prevention device, see Article IV-Water Service, Section 10. Cross Connection.

ARTICLE VII-WATER MAINS AND APPURTENANCES

1. Material and Installation:

All materials to be used in conjunction with any and all water mains and the installation of the same shall be in strict accord with Article VIII-"Specifications for Water Main and Service Installation" of these regulations. All water mains and appurtenances shall be installed by the Water Department employees or a contractor who has been approved by the Water Department.

2. Pipe Size:

All water mains shall be sized by the Water Department in conjunction with the Master Plan of the distribution system, or as calculated by the Water Department or its consulting engineers. All new water mains shall have a minimum diameter of eight (8) inches. Piping for hydrant services shall have a minimum diameter of six (6) inches.

3. Fire Hydrant Spacing:

Fire hydrants shall be spaced at a maximum distance of 500 feet in residential zoned areas; 300 feet in commercial, business, and industrial zoned areas. The Fire Chief can request a different spacing standard depending on the situation. The applicant must show proof that the Fire Chief has approved all proposed fire hydrant locations. Measurements shall be taken along a traveled way, whether public or private. The measurements shall begin at the closest existing hydrant. An additional fire hydrant shall be placed at the dead end of all water mains.

4. Fire Hydrant Access:

No person shall obstruct access to a fire hydrant. Fire hydrants shall have a three foot clear radius measured from the center of the stem of the top of the hydrant. No foliage, fencing, parking space, or other objects shall obstruct the clear area. No person may landscape to change the grade around the base of the hydrant so as to prevent the use of a four inch cap. Locations where existing objects such as, but not limited to, buildings, walls, fences, trees, on sloping grades that does not permit a three foot clear radius, may be granted a waiver by the Water Department. Before any waiver of this Regulation is granted all other possible locations must be considered. Filling or excavating around any fire hydrant will not be permitted if the finished grade will be less than one inch (1") or more than six inches (6") between the ground surface and the breakaway flange of the fire hydrant for a radius of four feet (4') around the fire hydrant.

5. Use of Fire Hydrants:

The use of all fire hydrants is restricted to employees of the Water Department or by persons given specific authorization by the Water Department. During fire emergencies members of the Fire Department of the Town of Chatham and/or other towns lending mutual aid are authorized to operate fire hydrants.

6. Cost of Water Main:

In private division of land, commercial, business or industrial complexes and all other areas not presently serviced by Town water, the developer or owner shall be responsible for all costs with regard to water main installation(s) and connection(s) to the existing system.

In existing division of land, water mains shall be installed under the betterment sections of Massachusetts General Laws Chapter 40, Section 42G, 42H, and 42I subject to Town meeting appropriations. All betterment projects shall be in strict accordance with the "Betterment Policy" as published and adopted by the Board.

7. Need for Water Mains:

The developer or owner of a division of land where water is available within 500 feet will be required to serve and supply his development with water in accordance with these regulations. Any property that has an existing public water service and is a division of land, the developer or owner will be required to upgrade the water mains and services to comply with these rules and regulations before the transfer of any parcel. Industrial, commercial, condominium or multi-family residential, and like buildings that are not a division of land shall be reviewed by the Water Director and Fire Chief on an individual basis. They shall still be governed by these Rules and Regulations and be required to install and maintain water mains and fire hydrants.

8. Application for Water Mains Installation:

An application for water main installation shall be completed by the developer or owner and submitted to the Water Department for review and approval before any work can proceed. All applications must contain the complete information requested and an engineered construction plan prepared by a Massachusetts Registered Professional Engineer with a scale of 1" equals 40 feet (1" = 40'). Payment of all required application fees, including the service availability charge and any other fee established by the Board shall be made at the time of the application.

9. Construction within a Flood Plain:

All proposed water facilities located in the flood plain district established under the zoning by-law, shall not permit the infiltration of flood waters into the system.

10. As-Built Drawings:

After completion of any division of land or residential dwellings with four (4) or more dwelling units, and/or commercial developments with (5) or more water closets, and/or industrial buildings, and whenever the Water Director requires, the developer or owner shall furnish a completed reproducible Mylar "As Built" drawing 1 inch equals 40 feet (1"= 40') to the Water Department. The drawing shall contain highway layouts, drainage layouts with profiles, water main layouts with profiles and showing ties to main gate valves, fire hydrants, fire hydrant gate valves, description of the water services to each building, showing two curb stops ties and sewer layouts with profiles, force mains, manholes, and descriptions of the sewer services to each building. The drawing shall contain depth from finish ground to all water and sewer mains, services, and appurtenances with exact locations (two ties) by using buildings or other permanent structures as points of reference. The drawing will show any other information deemed necessary by the Water Director

**ARTICLE VIII-SPECIFICATIONS FOR THE INSTALLATION OF
WATER MAINS AND SERVICES**

1. Plans and Specifications:

Plans and specifications for the installation or modification of water mains and service connections that are to be connected to the Town's public water system shall be submitted simultaneously with application for the connection, modification or extension to the water system. All labor and materials (except meters) required for the installation shall be furnished by the owners of the property at no cost to the Town.

2. Water Pipe:

The Licensed Utility Installer (LUI) shall furnish, lay, join, test, and disinfect all water pipe, fittings, and appurtenant material and equipment as indicated on the drawings in accordance with the relevant provisions stated in these Rules and Regulations.

3. Turning Off the Water:

The LUI shall be responsible for notifying the Water Department, Fire Department, and all water users affected by the turning off of the water supply. Except in an emergency, a notification shall be delivered to all affected water customers at least 36 hours prior to the actual turning off of the water supply.

4. Pipe Trenches:

Water pipes shall be located as follows: not within 5 feet of other utilities; not within ten (10') feet from any part of a septage system's leaching pit or field, nor within 10 feet of any sewer line and septage tank. If a sewer pipe crosses a water pipe either the sewer pipe or water pipe shall be encased in a continuous sleeve for a perpendicular distance of ten (10') each side of the water pipe.

5. Operation Before Final Acceptance:

After satisfactory completion, testing, disinfection, and flushing of the water system, the system shall be placed in operation. Operation of the system shall not in any way be construed as an acceptance of the system or any part of it as a waiver of any of the provisions of these Rules and Regulations.

The LUI shall be responsible for the system during the guarantee period and he shall make any adjustments or repairs which may be required and remedy defects or damages which may occur at his own expense.

6. Damage to/or Removal of Existing Obstructions:

In the course of doing water system work, it may be necessary to temporarily remove or disturb parts of existing curbs, landscaping, or other facilities. The LUI shall be responsible for the replacement and restoration of the disturbed existing facilities to a condition equal to or better than the condition before he disturbed them.

7. Lines and Grades:

Water piping, fitting, valves, equipment, and appurtenances shall be installed at the locations indicated on the drawings and as designated in these specifications, unless otherwise directed by the Water Department. The minimum finish cover over the top of the barrel of all water pipe shall be five (5) feet.

8. Pipe Foundations:

All water pipe and appurtenances to be laid in open trench excavations shall be bedded in a minimum of six inches (6) of clean sand and uniformly supported along its horizontal axis and half way the barrel of the pipe.

9. Inspections of Pipe Before Installation:

All water pipe, fittings, equipment, and appurtenances shall be carefully inspected and if conditions do not permit disinfection after installation as stated in the following "Disinfection and Flushing" paragraph, the pipe,

fitting, equipment, and appurtenance shall be disinfected in the field before lowering them into the trench. All pieces found to be defective, as determined by the Town's Inspector, shall be removed from the work. Such rejected pipe, fitting, equipment, or appurtenance shall be clearly tagged in such a manner as not to deface or damage it and the pipe shall then be removed from the job site by the LUI at his own expense. Results of shop tests, which are required in the following Material Specifications, shall be submitted to the Town's Inspector for approval prior to installation of the pipe for which the test results were ordered.

10. Installation of Pipe, Fittings, Equipment, and Appurtenances: All pipe fittings, equipment, and appurtenances shall be carefully handled by equipment of sufficient capacity and proper design to avoid damage to the pipe, fittings, equipment, and appurtenances. No defective pipe, fittings, equipment, or appurtenances shall be laid or placed in the piping. Any piece discovered to be defective after having been laid in place shall be removed and replaced by a sound and satisfactory piece at the expense of the LUI.

Each pipe, fitting, equipment, or appurtenance shall be cleaned of all debris, dirt, etc., and if conditions do not permit disinfection after installation as stated in the following "Disinfection and Flushing" paragraph, the pipe, fittings, equipment, and appurtenances shall be disinfected before being laid and shall be kept clean until assembled and incorporated as part of the completed work.

Pipe, fittings, equipment, and appurtenances shall be laid accurately to the lines and grades indicated on the drawings. Care shall be taken to ensure alignment both horizontally and vertically and to give the buried pipe firm bearing along its entire length. Pipe shall not be laid in water nor shall water be allowed to flow through it. The LUI shall take all necessary precautions to prevent flotation of the pipe in the trench.

Backfilling of the pipe trench shall be done as specified by the Water Department; "Town of Massachusetts Specifications for Regulating Excavation/Construction within Public Ways" (Attachment A) or as directed by the Town of Chatham's Surveyor of Highways; the Town of Chatham's Sub-division Control Regulations; and/or as stated in the permit issued by Mass Highway. No stones or rock larger than four (4) inches in any dimension shall be placed within six (6) inches of the pipe barrel.

11. Adapters:

Where it is necessary to join pipes of the same or of different types, the LUI shall furnish and install the necessary adapters as required or as indicated by the drawings. Adapters shall have ends conforming to specifications for the appropriate type of joint to receive the adjoining pipe.

12. Temporary Plugs:

Water-tight plugs must be used to close all pipe line openings when pipe laying is stopped for any reason. Joints of any pipe in trench must be completed before work is stopped. If any water gets into the trench, the plug must remain in place until the trench is dewatered and all danger of water entering the pipe is eliminated.

13. Thrust Blocks and Piping Supports:

The LUI shall furnish and install all supports necessary to hold the pipe, fittings, equipment, and appurtenances in a firm and substantial manner at the lines and grades indicated on the approved drawing or as specified.

All bends, tees, and other fittings, four (4") inches in diameter or larger, shall be thrust with Class A concrete placed against undisturbed earth where firm support can be obtained. If the soil does not provide firm support, then suitable bridle rods, clamps and accessories to brace the fittings properly shall be provided. Such bridle rods, etc., shall be coated thoroughly and heavily with an approved bituminous coating after assembly or if necessary, before assembly.

14. Connections to Other Facilities:

The water pipe shall be connected to existing or new structures and piping as shown on the approved drawings. The LUI shall furnish and install all such fittings and appurtenances as are necessary to make the connections in a firm and substantial manner, whether all such fittings are detailed or not.

15. Field Testing:

The water pipe shall be given pressure and leakage tests in sections of approved length as approved by the Water Director. For these tests, the LUI shall furnish a water test pump, water meter, and a pressure gage. The LUI shall also furnish and install suitable temporary testing plugs or caps for the pipeline and all labor required. The meter and gage shall be installed by the LUI in such a manner that all water entering the section

under the test will be measured and the pressure in the section indicated and they shall be kept in use throughout all tests.

The scheduling of pressure and leakage tests shall be as approved and attended by the Water Department or Town Inspector.

The section of pipe to be tested shall be filled with water of approved quality by opening the air release valves first and then one valve connected to the existing system and all air shall be expelled from the pipe.

When the pipe is filled, the valve to the existing system shall be closed first and the air release valves shall be closed last. The filling of the pipe shall only be done with a representative of the Water Department or Town Inspector in attendance. If air release assemblies are not available at high points for releasing air, the LUI shall perform all excavation(s), make the necessary tap(s) at such highpoint(s), shall plug said holes after completion of the test with brass or bronze plug(s), and backfill the excavation(s).

The LUI shall make a leakage test by metering the flow of water into the pipe while maintaining (in the section being tested) a pressure equal to 1.5 times the highest pressure to which the pipe will be subjected under normal conditions of service or 150 psi, whichever is greater. This shall be done by placing the section under pressure by pumping.

The lengths of joint to be used in determining the allowable leakage shall be based on the nominal diameter of the pipe. The allowable leakage shall be less than 11.65 gallons per inch diameter per day per mile of water main tested with the fire hydrants closed and the fire hydrant line valves open, maintaining a pressure within 5 psi for a minimum of two (2) hours duration. If the section shall fail to pass the pressure test, the LUI shall locate and repair or replace the defective pipe, fitting, or joint, at his own expense.

If, in the judgment of the Water Director, it is impracticable to follow the foregoing procedure exactly, modifications in the procedures may be made if approved by the Water Director, but in any event the LUI shall be responsible for the ultimate tightness of the line within the above leakage requirements with no allowances for leakage from hydrants or valves.

16. Disinfection and Flushing:

After the pipe has been pressure and leakage tested and found

acceptable, it shall be flushed thoroughly by the LUI. After completion of the flushing operation, the LUI shall disinfect the water main and/or service pipes with a solution consisting of 50 parts per million (ppm) of chlorine in full compliance with the latest revision of AWWA standard C651.6. Where conflicts appear between these specifications and AWWA (65), the more stringent requirement shall apply. This work shall be done with the attendance of a representative of the Water Department or Town Inspector. Following chlorination, the pipe shall be flushed again to remove any evidence of chlorine and contamination, as determined by bacteriological analysis. The bacteriological test analysis shall be acceptable when zero (0) count is achieved in two consecutive tests. For this work the LUI shall furnish all equipment, material, and labor required for collecting and testing the samples. If, in the judgment of the Water Director and only with his approval, it is impractical to disinfect the water system repair or installation after it is installed as stated above, the LUI shall disinfect all pipe, fittings, equipment and appurtenances by soaking or rinsing them with a solution consisting of 50 parts per million (ppm) of chlorine before installation.

17. Fittings:

All fittings shall be ductile iron, mechanical joint, cement lined, and tar coated, conforming in every respect to the latest AWWA specifications.

18. Gate Valves:

Valves shall be located in such a manner and number so that lines on mains can be isolated by individual blocks for maintenance purposes and length of water mains shall not exceed one thousand (1000) feet between valves. Kennedy, Darling, or Mueller mechanical joint, bronze mounted, resilient seat wedge type, open left (counter clockwise) gate valves with 2" operating nut are acceptable and shall conform in every respect to the latest AWWA specifications.

19. Gate Boxes:

Gate boxes shall be Buffalo #5663 slide type, 24" top section with flange at the top of box, 36" bottom section. Boxes to be cast iron, bituminous coated with cast iron covers for heavy traffic use.

20. Blow-Offs:

All blow-off connections shall have a minimum diameter of two (2) inches, copper tubing size (CTS), ultraviolet light protected polyethylene pipe (PE) with a 200 p.s.i. rating, and with a CTS curb stop valve with no waste drain. Permanent blow-offs shall be installed with an Erie style curb box with a brass pentagonal plug in the cover, with a buried length

between 4 to 5 feet, and with a stainless steel rod with a corresponding length of 24 or 30 inches. The blow-off pipe shall be installed within the top section of a valve box, and the blow-off pipe shall terminate twelve (12") inches below the top of the valve box with a two (2") inch iron pipe thread male adapter.

21. Service Pipe:

All service pipe from the main to the building SHALL BE a minimum one (1") diameter copper tubing size (CTS), ultraviolet light protected polyethylene pipe (PE pipe) with a 200 psi rating, and with a CTS curb stop valve with no waste drain and an Erie style curb box with a brass pentagonal plug in the cover with a buried length between 4 to 5 feet and with a stainless steel rod with a corresponding length of 24 or 30 inches. Metallic backed trace tape with wording printed on the tape indicating a buried water line shall be installed one (1) foot above the pipe. When a pneumatic mole is used to install the service pipe, a trace wire shall be installed with the water service pipe. The trace tape or wire shall be attached from the water main to the curb box and from the curb box to the meter.

NOTE: NO lead, copper, or galvanized pipe or fittings will be used in any part of the water system.

22. Blow-off and Service Fittings:

Plastic to Pipe Adapters with single piece (non split) stainless steel or Teflon inserts shall be used and only brass elbows and nipple fittings will be used.

23. Saddles:

Double strap bronze saddles w/cc thread shall be used on all service taps to transite (AC), or plastic water mains. Ductile iron or cast iron water mains will be tapped directly.

24. Corporations, Curb Stops, and Curb Boxes:

A one inch (1") corporation with cc thread SHALL BE used for all house services. Erie style curb boxes with a brass pentagonal plug in cover 4 to 5 feet buried with 24 or 30 inch stainless steel rod will be installed at the road property line. A concrete brick will be placed under the curb stop for support. Cut the curb box to appropriate length so the telescopic section does not rest on the curb stop. The stainless steel service rod will be centered in the curb box.

25. On Property Shut Off Valve:

Erie style curb boxes with brass pentagonal plug in cover 4 to 5 foot buried with 24 or 30 inch stainless steel rod may be installed within five feet, but not closer than three feet from the building. A concrete brick will be placed under the curb stop for support. Cut the curb box to appropriate length so the telescopic section does not rest on the curb stop. The stainless steel service rod will be centered in the curb box.

26. Sleeve Type Couplings:

Sleeve type couplings shall be Style 38 steel couplings for plain-end ductile iron pipe made by Dresser Manufacturing Division, Bradford, Pennsylvania, Style 248 Clow Corp; or approved equal. The couplings shall be furnished with the pipe stop removed. Couplings shall be provided with plain, Grade 27, rubber gaskets and with black steel, track-head bolts with nuts. When buried in the ground, the bolts and nuts shall be thoroughly coated with an approved bituminous coating.

27. Assembling Sleeve-Type Couplings:

Prior to the installation of sleeve-type couplings, the pipe ends and coupling shall be cleaned thoroughly and disinfected with a solution consisting of 50 parts per million (ppm) of chlorine for a distance of 8 inches. Special non-toxic gasket lubricant shall only be used as a lubricant. A follower and gasket, in that order shall be slipped over each pipe to a distance of about 6 inches from the ends, and the middle ring shall be placed on the already laid pipe end until it reaches the pipe stop or is properly centered over the joint. The other pipe end shall be inserted into the middle ring and brought to the proper position against the pipe stop or in relation to the pipe already laid. The gaskets and followers shall then be pressed evenly and firmly into the middle ring flares. After the bolts have been inserted and all nuts have been made up finger-tight, diametrically opposite nuts shall be progressively and uniformly tightened all around the joints by use of a torque wrench of the appropriate size and torque for the bolts.

28. Handling and Cutting Pipe:

Cement lined pipe and fittings are comparatively brittle and every care shall be taken in handling and laying pipe and fittings to avoid damaging the lining, scratching or marring machined surfaces, and abrasion of the pipe coating or lining.

Any pipe or fitting showing a crack and any pipe or fittings which have received a severe blow that may have caused an incipient fracture, even

though no such fracture can be seen, shall be marked as rejected and removed at once from the work.

29. Laying Pipe and Fittings:

Gasketed joints shall be made up by first inserting the gasket into the groove of the bell and applying a thin film of special non-toxic gasket lubricant uniformly used over the inner surface of the gasket which will be in contact with the spigot end of the pipe. The end of the pipe shall be beveled on the cut off edge to facilitate assembly. The end shall be inserted into the gasket and then forced in until it seats against the bottom of the socket. The pipe end must be seated against the bottom of the socket.

30. Tapped Connections to Cast Iron, Ductile Iron Pipe, or Transite (AC) Pipe:

The connection at the junction of the Town's water main to the proposed service connection shall be made by the LUI.

A tapping saddle will be used by the LUI to connect all water services equal or less than 2 inches to the Town's transite, AC, or plastic water mains. Direct taps will be required for a service equal or less than 2 inches to the Town's ductile iron or cast iron water main.

A tapping sleeve and gate valve (TSG) or tee and gate valve shall be used for connecting pipe with a diameter larger than 2 inches. The tapping sleeve shall encompass the entire barrel of the main to be tapped and be equipped with adequate gaskets to provide a water tight joint around the entire barrel of the main. Tapping sleeves shall be approved by the Water Director prior to installation.

Connection to the Town's water main shall not be made without a representative of the Water Department being present to inspect the work. All parts, equipment, and the barrel of the main that will be in contact with the water shall be disinfected with a solution consisting of 50 parts per million (ppm) of chlorine before the tap is made.

All taps shall be made in the flat part of the run of the pipe. The connection shall be made by means of a tapped tee, tapping saddle, tapping sleeve, branch fitting and tapped plug or reducing flange, a tapping tee and tapping valve, all as indicated or approved.

All drilling and tapping of the water main shall be done normal to the longitudinal axis of the pipe. Water services of one (1") inch through two

(2") inch shall be tapped at a ten or two o'clock angle. No fittings shall be drilled and tapped. Drilling and tapping tools shall be used only by skilled trained mechanics. Drilling and tapping tools shall be appropriate for the work and shall be disinfected with a solution consisting of 50 parts per million (ppm) chlorine and in good condition so as to produce good clean-cut threads of the correct size, pitch, and taper.

Back tapping (tapping the water main on the opposite side of the main from the service location side or new water main side) will not be permitted.

31. Connection Service Shut Off:

A curb stop or gate shall be installed at the property line between the street or easement layout and the property to be served.

A service box with valve or gate may be installed within five feet but not closer than three feet from the building.

All gates and valves shall be supported on concrete brick or solid block; readily accessible; and in good working order before final acceptance of the installation is made by the Water Department.

All installations shall be made in a neat and workmanlike manner and be subject to inspection and approval of the authorized representative of the Water Department before back-filling commences. All bends in the pipe line (equal or greater than four (4) inches in diameter and all hydrants shall be backed or thrust with 2000 psi concrete to a solid trench wall. When laying pipe on soft or swampy ground or through ledge, at least 12" of approved gravel or crushed stone shall be placed under and around the pipe. If, in the opinion of the Water Department or Town Inspector, the excavated material is not suitable for back-filling, it shall be removed and clean gravel substituted.

All pipe, fittings, equipment, and appurtenances that will be in contact with the distribution systems water will be disinfected with a solution consisting of 50 parts per million (ppm) of chlorine.

32. Materials:

A. General:

If requested by the Water Department, Certificates of Materials specification compliance will be required to be submitted by the LUI.

B. Ductile Iron Pipe:

All mains along proposed or existing streets, ways, and easements shall not be less than 8-inch inside diameter and shall be constructed in accordance with the requirements of the Underwriters Laboratories, Inc., and the standards of the American Water Works Association (AWWA) specifications covering pipes for public water supply systems.

All water pipe shall be Class 52 (150 psi) cement lined, tar coated ductile iron pipe in eighteen (18) or twenty (20) foot lengths, and conform to the ANSI A21.50, A21.51 specification for Ductile Iron Pipe.

Jointing shall be of the rubber ring push-on type, conforming to ANSI A21.11. Ductile iron fittings shall be Class 250, cement lined, and shall meet the requirements of ANSI A21.4 and A21.10.

C. Pipelining and Coating:

The inside of ductile iron pipe and fittings shall be given a cement lining in accordance with ANSI A21.4.

The inside and outside of the pipe shall receive a bituminous seal coat in accordance with ANSI A21.4.

Machined surfaces shall be cleaned and coated with a suitable rust preventative coating at the shop immediately after being machined.

All hydrants, gates, fittings, corporation cocks, tapping saddle, tapping sleeves, curb cocks, meter horns, and house shut off valves shall conform to AWWA specifications and be of the same make and type as now used by the Water Department.

D. Hydrants:

1. Each hydrant shall be directly connected to the water main through a six-inch lateral and be equipped with a six-inch open left (counter clockwise) gate valve to be located at the tap of water main. Hydrant valve opening shall be a bottom valve with an area that is at least equal to an area of a 5¼ in. min. diameter circle and be obstructed only by the valve rod (hydrants with rising stems shall not be permitted). Each hydrant, under normal operating conditions, shall be able to deliver a minimum of 500 gallons per minute through its two (2) 2 ½ inch hose nozzles when opened together with a loss of not more than two psi in the hydrant. The hydrant shall be a non-rising stem (NRS) equipped with a drain valve that will allow it to self drain when the hydrant is closed and the drain will be closed when the hydrant is opened.

2. The Following Hydrants Are Approved:

Hydrants currently approved by the Water Department are: Darling B62B, Kennedy Guardian, Mueller Centurion II, or approved equal breakaway flange, with 5 ½ ft. buried line, 5" diameter opening, open left (counter clockwise). Hydrants shall be non-rising stem (NRS) designed for 150 pounds working pressure and shall have two (2) 2 ½ " hose nozzles and one (1) 4 ½" steamer nozzle. Barrel to painted red, cap and bonnet to be painted reflective white.

ATTACHMENT A

TOWN OF CHATHAM, MASSACHUSETTS

Specifications for Regulation
Excavation/Construction Within Public Ways

SECTION 1: General Requirements:

A. Preface:

1. Any public utility company, private contractor, builder, or any person(s) who intends to break any street, berm, curb or sidewalk surface, construct a driveway, or excavate any shoulder within the limits of a town way in the Town of Chatham, for any reason must first obtain a permit from the Chatham Highway Department.
2. This permit will be applied for at least forty eight (48) hours before any form of excavation is started and within seventy two (72) hours following the start of an emergency repair.
3. A permit will be granted if the proposed work is in the best interest of the Town and its inhabitants. A driveway permit will be issued with a building permit given by the Building Inspector. This permit must be approved by the Highway Surveyor. The granting of permits is conditioned by the applicants willingness to abide by these regulations.
4. Application forms for an excavation permit are available from the Building Inspector or the Highway Department. Completed forms must be returned to the Highway Department.
5. Plans of a sketch showing the proposed work require the approval of the Highway Surveyor. This requirement is only for new work and is not required for repairs to existing facilities.

B. Public Safety:

1. The permittee, from the time the work has started and until the completed work has been approved by the Highway Surveyor, will be responsible for the safety of the Public.

2. All highways will be passable at all times unless special permission has been granted by the Police Department and the Fire Department.
3. When required by the nature of the work, lights and barricades will be erected at the expense of the permittee.
4. If the Police Chief deems it necessary for public safety, the permittee will pay the expense of a police officer.
5. Massachusetts Law (Chapter 82, Section 40) requires that contractors/builders notify public utility companies in writing at least forty eight (48) hours before any excavation in a public way.

SECTION II: Excavations

A. General:

1. All excavations and other work within the limits of a Town way will be conducted in a manner which will not damage or disturb such features as stone walls, trees, fences, guard rails, etc.
2. If the work requires disturbing a road bound or property bound, the bound will be reset in its original location to the new grade of the shoulder or driveway and its new location certified in writing by a registered land surveyor.
3. The tree warden must be notified if the proposed work requires the removal of a tree, any part of which is within the public way.
4. The cutting of road surfaces less than three (3) years old will not be permitted unless authorized by the Surveyor of Highways.

B. Materials:

All materials used on construction within a public way will be subject to approval by the Surveyor of Highways. This will include but not be limited to the size, type and quality of pipe, and the type of gravel backfill. Cold patch as a temporary patching material will be allowed.

C. Driveway Entrance:

1. Driveway entrance onto Town ways shall be constructed according to the conditions of the area and will be approved by the Surveyor of Highways.
2. Driveways will not be allowed to enter directly onto an intersection rounding.
3. Driveway entrances will be located on the lot so as to permit maximum sight distance and safety.
4. The driveway will be constructed so as to prevent surface water and material from running onto the public way.
5. The driveway entrance crossing the Town layout will have a positive pitch to the street and will have a minimum of two (2) inches of bituminous concrete applied by the permittee.

D. Trenches: (streets, berms, curbs, curbs or driveway aprons only)

1. All trenches opened within a Town layout (streets, sidewalks, berms, curbs or driveway aprons) will be opened wide enough to allow a mechanical tamper to compact the material in layers no greater than eight (8) inches. Each layer will be compacted to a density equal to that of adjacent original material so that pavement can be replaced immediately. All cross trenches will be opened so that they can be properly filled and compacted before sunset with a temporary patch of asphalt applied.
2. The backfill will consist of the excavated material if it is declared suitable by the Highway Surveyor or his designee. Backfill will be placed in successive layers of not more than eight (8) inches of compacted depth. If, in the opinion of the Highway Surveyor, the excavated material is unsuitable, the entire rejected material will be disposed of by the applicant at no cost to the Town. In its place, the applicant will bring in suitable fill material consisting of approved material as directed. After thorough tamping around the utility, the eight (8) inch layers of backfill will be thoroughly compacted as follows: if dry it shall be moistened and then compacted by tamping with mechanical tampers. The final seven (7) inches of a seven (7) inches of a street, driveway apron, berm or sidewalk backfill will, in all cases, be processed stone thoroughly tamped.

3. After backfill is in place and satisfactorily compacted, the applicant will apply at once a 1 ½ inch temporary patch course over the entire excavated area. This temporary patch is to be left in place for at least one month and not more than four months, until no further settling can be reasonably expected. At that time the applicant will remove the temporary patch course. For oil treated roads, the permanent patch must be three (3) inch bituminous concrete (Type I-1) laid in two (2) courses, a two (2) inch binder course and a one (1) inch top course. If existing pavement is of greater depth, the patch should be of the same depth. At no time should bituminous concrete be laid in layers greater than 2 ½ inches. When the patch has been completed, the joints should be painted with a suitable emulsion and sealed with a fine grade sand.

4. No more than ten (10) feet of trench shall be left opened overnight and all trenches must be closed over weekends and holidays.

5. The permittee will be responsible for settlage for a one (1) year period from the date of the return of the completion permit.

E. Shoulders:

1. All road shoulders will be carefully returned to their original condition.
2. Lawns will be rebuilt with a minimum of four (4) inches of loam fertilized rolled and seeded.

F. Sidewalks:

Sidewalks will conform to Section II.D, sub paragraphs 1,2,3 and 4 of these specifications. The entire width of the sidewalk will be resurfaced.

SECTION III: Performance Bonds:

A. General:

1. All excavation permits issued shall require a certified check in the amount of one hundred and fifty (\$150) dollars to be posted with the Town Treasurer as a guarantee to fulfill this agreement. Driveway entrance work will not require a performance bond.
2. Street cuts over twenty six feet in length or significantly in scope than usual shall be bonded by a larger amount determined by the

Highway Surveyor. The minimum bond shall be \$150. Utility companies or contractors having a continuous bond on file with the Town of Chatham will not be required to obtain a separate bond. Any company having a continuous bond on file will so indicate on their permit application.

3. When permanent patching, reloaming and seeding, and all work required by permit has been completed and approved by the Highway Surveyor, the Town will refund to the applicant the amount of the bond posted.

4. The Highway Supervisor in his judgment may extend any time limit in these specifications if weather or other unforeseen conditions have hindered the proper completion of work.

SECTION IV: Violations

A. General:

1. If the job has not been completed within 15 weeks (from date of issuance of the permit) the Highway Surveyor will notify the permittee that he has one week to complete the work. If the work is not completed within this time the permittee will be notified that his permit has expired. The Town of Chatham will then complete the necessary work in any manner they deem appropriate. The costs of completing the work will be charged to the permittee. If he has posted a certified check these costs will be deducted from the amount of this check. If the permittee has posted a bond, the bonding company will be notified of the non-completion of the work and the costs owing to the Town of Chatham.

2. If the permittee allows construction to exist that is in any way dangerous to users of the street, sidewalk, shoulder berm, curb or driveway apron; then the Highway Surveyor will instruct the permittee to immediately correct the condition. If it is not expeditiously corrected, the Highway Surveyor will make arrangements to rectify the unsatisfactory condition and the costs will be charged to the permittee as outlined in paragraph 1. above.

3. Failure to obtain a permit prior to the start of any construction within a public way shall be subject to a fine of not more than fifty (\$50) dollars per offense.

Gilbert R. Borthwick
Surveyor of Highways

